

# Cascade Pale Ale

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **45**
- SRM **4.6**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **0 %**
- Size with trub loss **15 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **19.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **66 C**, Time **70 min**

## Mash step by step

- Heat up **16 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **70 min** at **66C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 3.5 kg (87.5%) | 80 %  | 5   |
| Grain | Viking Vienna Malt   | 0.5 kg (12.5%) | 79 %  | 7   |

## Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Cascade | 20 g   | 60 min | 6.4 %      |
| Boil    | Cascade | 20 g   | 20 min | 6.4 %      |
| Boil    | Cascade | 40 g   | 10 min | 6.4 %      |
| Boil    | Cascade | 20 g   | 1 min  | 6 %        |